

WARMLEY

Rural District Council.

ANNUAL REPORT

OF THE

Medical Officer of Health

FOR THE

YEAR 1897.



Warmley Rural District Council.

ANNUAL REPORT, 1897.

GENTLEMEN,

I have much pleasure in presenting to you my annual report for the year 1897. I have again to thank you for the cordial support you have continued to me, and for the uniform courtesy with which my reports, monthly and quarterly, have been received. I have also to thank both the Council and individual members for information and suggestions.

I propose to follow the course adopted last year in regard to the order in which each subject is taken up. It renders reference, and comparison of results much easier.

During the year I have taken the population as 15,500. In last report I mentioned certain disturbing influences. We are at present no nearer an exact estimate of population than we were then. I am afraid that until next census there will be no possibility of obtaining reliable figures. But by comparing the results of the various methods of estimating population, I think the figures used are very nearly right. The increase in the Staple Hill neighbourhood initiated, by the opening of the Railway Station there, is somewhat abated. The proposed electric tramway connecting us with the City of Bristol has become an accomplished fact. The Bristol Boundaries Bill also passed during the year. Both these latter circumstances will in the coming year favourably affect the increase of the population. Hence I have not followed the usual method of calculating the annual increase of population, because I believe it would lead to erroneous results.

The inhabitants of the district are chiefly employed in the staple industry of shoemaking, and both sexes are equally engaged in it. Mining, almost wholly of coal, gives employment to a large number of men and boys. Many women, especially the young, do tailoring and staymaking. There is one large stay factory at Bitton, which I inspected during the year; I found the sanitary appliances there all I desired. A large wholesale clothing factory is to be erected during the coming year at Staple Hill, which will give employment to large numbers of both sexes. Paper-making is carried on at Bitton; shoddy manufacture at Warmley; lime-burning at Willsbridge; tile-making and brick-burning at several places; there are pennant-stone quarries at Frenchay; there are numerous market-gardens, and a few other small industries. The purely rural population is chiefly engaged in agriculture, and the various forms of farming.

In my report for 1896 (page 4) I mentioned the social connection of the working population. I have little to add to that paragraph. I may mention, however, that a large proportion of the population belongs to what is popularly known as the working-class. The retired wealthy class is very meagrely represented; the most of those who are well-to-do are engaged in some business. So that your 15,500 of a population may be said to belong to the *producing* class.

The circumstances under which labour is carried on are for the most part favourable to length of life. The miners work in well-ventilated mines, and are not more subject to phthisis as a class than the general public. Other respiratory diseases occur more frequently *only* among the *branchers* who subject themselves unnecessarily to the fumes arising from the use of explosives. The shoemakers who work in the factories are well protected by the good sanitary condition of most of them. But a large number take their work home, and do it in small, close, ill-ventilated, hot workshops, attached to their dwellings. I have no figures with which to prove a greater incidence of disease among them. I shall endeavour, during the coming year, to obtain the figures I allude to, while systematically inspecting and reporting on the workshops.

The pennant-stone masons chiefly work in the open air, and I am not aware of the prevalence of any form of phthisis among them. Nor am I aware of any circumstances connected with the other industries mentioned which would affect the duration of life.

The drainage area of the parish of Mangotsfield might in future be separated with propriety from the rest of your district for statistical purposes. I propose in my quarterly reports to give separate figures for these two portions, for the following reasons. Mangotsfield is distinctly more urban than any other portion of your district, and in the near future will have become wholly urban in character. Next, it is a well-proven fact that a sewerage scheme when in action, has a distinct influence on the health of the community, both from its function of carrying away sewage from the near neighbourhood of the houses, and from the fact that the subsoil is drained by the disturbance created in making the trenches for the

sewers. The completion of such a scheme must inevitably lead to its logical conclusion—a system of scavenging to keep the surface clean, by removal of surface filth and systematic attention to accumulations of household refuse. A constant supply of figures will aid you in estimating the value of the work done in these directions, and the ordering of other matters to be taken up from time to time for consideration. That is all the change I contemplate making. But I shall still continue to give the figures for the district as a whole as heretofore.

We may now congratulate ourselves that there is little chance of our incorporation into the City of Bristol during the next generation, unless Parliament stultifies itself. But although this incubus is lifted, we have other smaller ones still weighing on us. There is a small body of opinion urging on the formation of the Parish of Mangotsfield into a local area. But the parish meeting called for the discussion of the matter gave a very decided quietus to this agitation for the time.

The absorption of part of your district into the urban area of Kingswood has been mooted. The carrying of the main sewer of the Kingswood system of sewerage *through* your district, and the erection of their outfall works *in* your district, is evidently the source of the suggestion. But I will discuss the matter in another connection. For any other reason it is not likely that either the County Council or the Local Government Board would sanction the inclusion of a unique and well-governed area like yours into that of Kingswood.

Water Supply:—

The mains of the West Gloucestershire Water Company cover a large portion of your area ; and during the year the service has been augmented very *liberally* by the Company. The inhabitants of the Parish of Mangotsfield mainly use Company's water. But I must again call your attention to the bad water supply at Viney Green. And during a dry summer it is frequently *deficient* also. The only way out of the difficulty is to guarantee the Company's price, and make the best terms you can with the Company on the one hand, and the proprietors on the other.

The supply of the purely rural portions of your district is fairly good ; and during the year several wells have been improved by protection and cleansing. In these parts no other supply is available, but I find that a good deal of carelessness adds to the chances of pollution. In most instances it is quite easy to *minimise* pollution, and even to *quite* exclude it.

I am glad to report that the supply at Beach, which has been under your consideration for some years, has been at last rendered good and ample. The recommendations I made to you nearly two years ago have been taken, and practically the plan therein mentioned has been carried out. We have to thank the suavity and good-nature of at least one of the proprietors for this satisfactory result.

The supply at North Common is still in a very unsatisfactory state. I understand the mains have been extended there ; and it is surely our duty to see that those who have bad or insufficient supply avail themselves of the better water.

The Public Health Water Act, 1878, makes it the statutory duty of a Rural Sanitary Authority to see that the district in all its parts has a *sufficient* supply of *pure* and *wholesome* water within a *reasonable* distance of *each* habitation. So far as new houses are concerned your surveyor cannot give his certificate of fitness for habitation till he is satisfied that a proper water supply is available. The Act also provides for *inspection* of the Water Supply periodically. So far as time permits this has been done ; but of course it is impossible to cover the large area systematically for all purposes. However, the conditions renders that unnecessary.

The well at Siston Common, which supplies a large number of houses there, was examined and found impure. You asked the West Gloucester Water Company to take their mains within reach of those houses. They have done so ; but I am not aware that anyone has taken the water. I will bring the matter under your notice at an early opportunity, when I hope the owners will be pressed to take Company's water and allow the well to be closed.

At Longwell's Green there is grave suspicion as to some of the well supply ; and I hope in the near future to examine it carefully.

During the year I have made 44 analyses of well-water, and found 29 fairly good, 11 usable, but risky, and 4 bad. The most of these were made in connection with dairies.

I have been informed by your late Clerk, Mr. Andrews, that a total of 101 houses have connected during the year. Appended is the list as supplied to me—

BITTON, 1 New House. HANHAM, Nil. OLDLAND, 2 Old Houses and 2 New Houses. MANGOTSFIELD, 10 Old Houses and 54 New Houses. SISTON, 24 Old Houses and 8 New Houses. Total of Houses connected 101.

I am not aware of any other fact connected with this subject requiring to be brought under your notice. I would again, however, urge the necessity of watching the water supply, the necessity for which has been so markedly shown in other quarters, but recently. And this must not be taken to be meant by me as a wholesale raid upon wells with a view to their condemnation. I desire to point out, however, that much of the impurity passing into wells in the more sparsely populated parts is perfectly avoidable. If piggeries and dung-heaps were so disposed as to be distant from the wells, and the wells properly protected from surface pollution, much of the water now in use in the country districts would be good enough. But in the more thickly populated parts, surface or shallow wells are always and necessarily unsafe ; and the sooner they are closed the better. Deep wells or artesian wells may be kept safe anywhere. By such wells I mean those which have at least one impermeable stratum above the spring, which arises in a lower stratum. Such

wells are expensive, and therefore uncommon. From these observations it is evident that in a district where wells are necessarily numerous, much constant supervision must obtain.

Sewerage and Sewage Disposal:—

I have again to report that the sewerage scheme for the Parish of Mangotsfield is still incomplete. The outfall works are nearly finished; and it is hoped that they will be ready for use by the month of March. Shortly after this report is in your hands, the inhabitants will have the privilege of joining the house drains to the sewers: an overseer of the outfall works will have been appointed: and a systematic house-to-house inspection of the drains will have been made. Thus all things will be in train for the utilization of the sewers. Besides, several sections of the scheme of sewerage have been finished or are in process of being so. I have asked the engineer for a report of the work done during the year under his supervision, which I append to this report. The date of his report is February 24th, and therefore contains matter properly belonging to the work of 1898.

During the year the disposal of sewage in this parish has been very inadequate to the requirements. So far as possible your inspector has put pressure on many; and by judicious management has continued to prevent many of the evils necessary in connection with the cesspool system prevalent. But it has been hard, disagreeable work, and work that cannot be carried on for long. It is to be hoped that the year 1898 will inaugurate a new era of sewage disposal in Mangotsfield. It has been a fortunate circumstance that most of the houses are supplied with the West Gloucester Water Co.'s water, and that wells are nearly obsolete. This has no doubt prevented much of the illness consequent on residence in a locality saturated with sewage from numerous cesspools nearly all erected on the principle of intentional leaking to avoid frequent cleansing. Nor can I blame the inhabitants of houses who have had inadequate cesspools for not cleansing as often as necessary; for there is great difficulty in disposing of the contents of cesspools. Your Authority has no covered cart to convey sewage from cesspools, nor has it any place to which to convey it.

This brings me to a subject which you will have to consider immediately, the matter of

Scavenging:—

I am still referring to Mangotsfield. So far as I know no system of scavenging exists. In a district, urban in character, there is no sufficient means for individual householders to dispose of household refuse; and consequently large heaps of refuse must accumulate frequently, giving rise to grave nuisance. I conceive it is the duty of a Sanitary Authority to provide for the periodic removal of such refuse, so as to prevent nuisance. I therefore urge upon your consideration the propriety of

providing the usual means of removing all household refuse. In order to complete a system of scavenging you ought also to have the roads and highways in your possession. For I can vouch, as all of you can, that they are in a filthy condition, especially in the main lines of traffic. A filthy condition of roads, along which large numbers are passing continually, is no small danger, either to those using them, or to those living on their borders. It would, therefore, not be out of your province to urge upon the County Council the propriety of giving you possession of the roads and highways as contemplated by the Act of 1894.

I may here state that the condition of the roads is at the bottom of the agitation in Mangotsfield for the formation of a local area. I understand that it is quite probable the possession of the roads by the District Council may soon become a fact.

In the remaining portion of your area sewage is disposed of by each householder according to what is known as the cesspool plan. In the purely rural parts I am afraid the drains and cesspools are not up to modern requirements for more populous localities. I must say, however, that they are usually more efficient, better constructed, better located generally, than they are in some of the semi-urban parts. As a whole the purely rural portions are now in a good condition. Refuse and manure heaps are not frequent, and nuisances of every kind are abated. The people are gradually being educated to know that all nuisances are bad for themselves ; and generally an idea of cleanliness is being formed. The maxim that "filth should not accumulate near houses" is acted on as the only radical way to good sanitation. Among the semi-urban population we find our greatest difficulty in carrying out our plan. It entails a great amount of watchfulness and constancy of supervision which are difficult to maintain evenly over a large area. Special work leads frequently to examinations and advice informally given, and is almost always acted upon ; so that in the reports appended much of the best work done cannot necessarily appear under special heads, or at all.

Dotted here and there in the rural area (by which I mean the rest of the district excluding Mangotsfield), there are several *semi-urban* parts threatening to become *wholly urban* in the future ; and, I may say, in the *near* future, if certain projects are carried out. As soon as density of population makes a place urban, you must of necessity provide urban means of sewage disposal. There is no doubt that Warmley, Cadbury Heath, and Warmley Batch may soon become urban ; Longwell's Green, North Common, and Oldland Common, are pointing in the same direction later on ; and it is possible that in no distant future Willsbridge and Bitton may follow. However the future may be, there is the present contamination of Siston brook by a large stream of sewage from Kingswood, and from nearly every house near its banks, to be dealt with, as that is inadmissible as it at present exists. In the three first-mentioned places there is no means of sewage disposal but by *properly constructed* cesspools, constantly supervised, unless you allow the brook to be contaminated, which you have no right to do. If

you choose to continue the cesspool system in these parts according to L.G.B. requirements, you can do so; and as yet, that system will be sufficient. But each individual owner of property must bear considerable expense and trouble, which will become entirely useless if other owners take to building, so as to increase the population. This must be evident to most of you as no chimera in these days of rapid movement. It is true that we have to deal with the actual condition of things; but it is also necessary to deal with the near and probable future, before entering upon any definite line of action. I may say, in conclusion, that the facts are as follows :—Siston brook is contaminated by Kingswood sewage, and to a smaller extent by your own; that certain portions of your district *at present* contaminating the brook are capable of being served by the cesspool system, if properly supervised, but that such supervision will lead to considerable expense to private individuals, and to additional working power by your Authority; and that no arrangements on this basis can be permanent. This inevitably leads to the formation of a drainage area ere very long, or smaller drainage areas much sooner. Just yet, the matter is not urgent so far as you are concerned. But you are aware that the neighbouring Urban District Council of Kingswood have a scheme in contemplation, by which they would carry their mains *through* your district into outfall works in your district. Now, in such circumstances, certain powers are granted under sections 28, 32, and 34, of the Public Health Act, 1875. It is quite clear that you have the power to so place and construct these Kingswood main sewers and outfall works as to be serviceable to you, under arrangement with the Urban District Council of Kingswood, or to contest their construction at all. It would therefore be advisable to keep yourselves in constant touch with the designs of your neighbours, so that whatever scheme may be adopted by them, you may be ready to utilize it for your own purposes as occasion arises. But, in order to do so, you must take the matter into consideration now, and be ready to act as soon as may be required. I am glad to know that since the beginning of the year you have appointed a Committee of inquiry, and that that Committee has asked your Officials to report on the matter. In the next annual report I hope to make some definite statement as to what has been done to meet the requirements of the area under consideration.

INFECTIOUS DISEASES.—The following Table will show at a glance the incidence of notifiable diseases during each month of 1897 :—

		Scarlet Fever.	Diphtheria.	Membranous Croup.	Enteric Fever.	Puerperal Fever.	Erysipelas.
January	{ Under 5 5 upwds.	5 8	1 —	— —	— —	— —	— —
February	{ Under 5 5 upwds.	1 6	— —	— —	— —	— —	— —
March	{ Under 5 5 upwds.	4 2	— —	— —	— —	— —	— —
April	{ Under 5 5 upwds.	1 2	— 1	1 —	— —	— —	— 1
May	{ Under 5 5 upwds.	— 9	— —	— —	— —	— —	— 1
June	{ Under 5 5 upwds.	— 2	— —	— —	— —	— —	— 2
July	{ Under 5 5 upwds.	— 4	— —	— —	— —	— —	— 1
August	{ Under 5 5 upwds.	1 —	— 3	— —	— 1	— 1	— 4
September	{ Under 5 5 upwds.	— 2	— —	— —	— 2	— —	— 4
October	{ Under 5 5 upwds.	1 9	1 —	— —	— 1	— —	— 2
November	{ Under 5 5 upwds.	— 7	— —	— —	— 2	— —	— 3
December	{ Under 5 5 upwds.	1 5	— —	— —	— —	— —	— 2
Totals	{ Under 5 5 upwds.	14 56	2 4	1 0	0 6	0 1	0 20

I think it well here to print a Notice received from the Clerk to the Gloucester County Council. It will explain the reason for the slight alterations made in the usual printed forms received from the Local Government Board:—

Office of the Clerk to the County Council for Gloucestershire,

Shire Hall, Gloucester, 5th February, 1898.

Dear Sir,

REPORTS OF MEDICAL OFFICERS OF HEALTH.

I am directed by the Medical Officer of Health (Reports) Committee of the Gloucestershire County Council, to call attention

to the standard columns of Forms A and B of your Annual Report as Medical Officer of Health, and to ask you to be good enough to cross out "Typhus" in the heading of column No. 5 of Form A (which is always blank), and substitute therefor the word "Cancer," and appropriate the blank column No. 19 in Form A to "Influenza." In Form B the two blank columns Nos. 12 and 13 should be appropriated to "Measles" and "Influenza" respectively.

The Committee would also be obliged if you would forward your Report, which by the Local Government Board Regulations should be presented six weeks after the 1st January in each year, to the County Council in time for its Quarterly Meeting in April.

I am, dear sir,

Yours faithfully,

EDWARD T. GARDOM,

Clerk to Gloucestershire County Council.

To the Medical Officers of Health
for the County of Gloucester.

SMALLPOX.—No case. I have obtained from your Vaccination Officer a Table similar to that inserted in last year's report. I have inserted it as it was given me. You will see that of 1266 children born during the eighteen months, we have knowledge of 501 successful vaccination, or less than one-half, while 590, or 89 more, are still defaulters or unaccounted for. Whatever may be the outcome of the reports of the Royal Commission on Vaccination as to future legislation, the *present* law requires Boards of Guardians to enforce Vaccination.

1ST JANUARY to 31ST DECEMBER, 1896.

Districts.	Births	Successfully Vaccinated.	Died Unvaccinated.	Postponed.	Removals.	Defaulters, not accounted for
BITTON ...	228	133	22	3	5	65
OLDLAND...	620	214	73	17	5	311
Total	848	347	95	20	10	376

1ST JANUARY to 30th JUNE, 1897.

BITTON ...	135	65	17	2	...	51
OLDLAND...	283	86	20	5	6	163
Total	418	154	37	7	6	214

SCARLET FEVER.—Seventy cases of this disease were notified during the year, as against 144 last year. You will see from the Table that it has never been absent during any one month; nor have the cases ever been numerous at any one time. During the

first three and last three months the cases were rather more numerous. They were pretty generally scattered over the whole district. The nine cases in May occurred in three families adjacent to previous cases. Nearly every case was traceable to a previous case by close communication. The question of milk infection was never raised. The schools were not spreading agents ; the managers and teachers gave me every aid. A great many of the cases were due to the visitation of affected families by mothers and others. There still prevails the idea that a mild attack of Scarlet Fever is not a serious matter ; and many parents go further, and say that as all children are bound to have it, the earlier they have it the better. There is also a great tendency to hide cases from the Authority on account of the trouble of isolation, and the fear of losing employment. Two such cases came under my notice, one of which you prosecuted, and successfully. There is also wide-spread ignorance regarding the responsibility of notification, although posters were put all over the district. It would be well to post the neighbourhood again with notices containing, in big letters, the statement (and *nothing else*), that the parents are liable to a fine for non-notification of any one of the eleven notifiable diseases.

I am afraid you will always have some Scarlet Fever cases in your district while there is so much communication with neighbouring districts. There is no regular plan of isolating early cases by any of the surrounding Authorities ; and until some common scheme is formulated by a large area, such as a county, and rigorously carried out, there is little use in one Authority *only* so doing. As long as there is a number of non-immune children you must have this disease among you ; and it will be epidemic or sporadic according to the amount of pabulum there is.

Although seventy cases of Scarlet Fever occurred in your district there is no death recorded from it. This points to a mild type of disease, a fact which is often observed when it has been long prevalent in a district. It looks as if the frequent transmission attenuates the poison somewhat, when that occurs among families which are possibly related. I have little proof of this except a small clinical experience.

In connection with this disease I have also to point out, that of 104 notified cases of infectious disease, 34 others *only* belonged to other five of that group ; so that if you eliminate Scarlet Fever, the incidence of notifiable zymotic disease is very low.

DIPHTHERIA AND MEMBRANOUS CROUP.—Six cases of Diphtheria and one of Membranous Croup were notified during the year. The latter died, and one of the former also died.

I cannot see why these two diseases are not grouped together. Clinically they are difficult to differentiate, and I am not aware that they are in a better position bacteriologically. Therefore out of seven cases you have two deaths. One case occurred in January, at Beach ; one in April, further down the valley ; three in August, in one family, in the village of Bitton ; and one in October, on Siston Common. The

case of Membranous Croup occurred at Downend. It is difficult to see any connection between the cases, and just as difficult to trace the origin of any one of them. Six of the cases found were in four homes, the drains of which were not good, in one only was there a considerable nuisance.

ENTERIC OR TYPHOID FEVER.—On August 17th the first case of this disease for the year came to Staple Hill. It was severe from the time I saw it, and ended in death; as did also the second, which occurred in the same house. The first one came from Bristol, where, so far as I know, it was neither recognised nor notified. The second occurred on the 4th September, and was evidently traceable to the first. The third case occurred on the 20th September, and ended in death; but its connection with either of the others was not established to my satisfaction, nor to any other known cause. The fourth case (the third in time) occurred on the 7th September at Downend, ending in recovery, and was evidently unconnected with any of the others. The only point relating to causation appeared to be the lad's occupation in cleaning a foul cesspool about ten days before the disease was observed. I do not know the history of the cesspool as to its connection with previous cases. The fifth case occurred on the 6th November, at Bitton, and came from Bristol. It ended, I believe, in recovery. The sixth case, a sister of the fifth, occurred in the same house on the 30th November, and also ended in recovery.

TYPHUS.—No case.

CONTINUED FEVER.—No case. I have long ago come to the conclusion that this, as a separate disease, does not exist.

RELAPSING FEVER.—No case.

PUERPERAL FEVER.—There was one case of Puerperal Fever. This occurred in a house where Scarlatina existed previous to the confinement, and continued to exist in a virulent form after the confinement. It ended in recovery. The case of death from the same disease was that of one notified during December, 1896. The woman was confined in the beginning of December, by a midwife. A few days after symptoms of facial erysipelas were prominent, and about three days further on blood-poisoning (or Puerperal Fever) supervened. In the end the woman died from well-pronounced septicaemia.

CHOLERA.—No case. On the 11th January, I received a letter and telegram regarding the arrival at Oldland Common of a woman who had been a passenger on board the S.S. *Nubia*, which arrived at Plymouth on the 9th inst. with some cases of Cholera among the troops. I visited her the same day, and found her free from choleraic symptoms. I kept her under observation for a week, but nothing supervened.

ERYSIPELAS.—Twenty cases were notified during the year. One case of facial erysipelas died, besides the one mentioned under the head of puerperal fever. I still fail to see why this disease should be compulsorily notified, even after another year's experience.

Many of the cases I have seen are decidedly not infectious in the ordinary meaning of the word ; and more than one of the twenty occurred in the best-drained houses of the neighbourhood. Of course I am not questioning diagnosis ; I am accepting each and all in good faith. But I fail to see any benefit derived by the community from these twenty notifications. I should suggest that its place be taken by Phthisis.

MEASLES.—During the first five and especially the first three months of the year, this disease was epidemic. It is not notifiable, but I am able to state from experience as a practitioner in the district, that a very large number of children were attacked. It would be wrong to commit myself to figures, and imprudent even to guess a percentage. I do know that the epidemic was confined to Mangotsfield parish. Twelve deaths are attributed to Measles alone, or to that and its complications. But Whooping Cough was prevalent in the same months ; and I myself know that many children under 5 had both these diseases, the one following on the other, and the usual respiratory effects after severely accentuated. This fact confuses our figures ; for the personal element in each practitioner is brought into the certificate of death. One may think more of Measles, another of Bronchitis, and a third of Whooping Cough, as contributing to the death. As neither Measles nor Whooping Cough is notifiable we have no means of gauging the range or direction of the personal element. And I have no right to bring my own personal element into general figures.

WHOOPIING COUGH.—This disease gave rise to sixteen deaths of children under 5 years of age. I have already stated the prevalence of this disease as coincident with that of Measles in Mangotsfield. The two diseases of Measles and Whooping Cough, as I before stated, frequently attacked the same child. Anyone can easily see the disastrous effects of such a combination, leading to serious respiratory disease ; and this is well seen in the 24 deaths due to the latter of children under 5. There is no doubt that the respiratory complication leads to most of the deaths occurring in those affected with Measles or Whooping Cough. This observation points to the fact that during the colder months great care ought to be exercised by parents in guarding their children afflicted with these diseases from damp and cold, especially when combined.

INFLUENZA.—During the last two months of the year Influenza has been present amongst us, and cases have been gradually increasing in number. No death has been ascribed to it ; but we are evidently on the border of a large outbreak. I am unable to give any figures in relation to it.

Infectious Diseases Hospital.

The remarks I made in last annual report I still adhere to. On account of the distance from the centre of population, and its inaccessibility, we have never used the Hospital for isolation this year. I have already expressed my opinion as to the use of Hospital in Scarlatina cases. In cases of Enteric Fever such a Hospital

would be of great value ; also in an out-break of Diphtheria, where antitoxin treatment could be properly undertaken. In Smallpox cases it is absolutely necessary. But I do not consider Keynsham is the proper situation for such a Hospital for our district ; and I am quite sure it will never be utilized while in that inaccessible place. Probably in the rearrangement of Unions and Districts now imminent we may be able to get our Isolation Hospital made more accessible.

Ambulance and Disinfector.

While these remain at Keynsham the above remarks apply. We have used the Disinfector only once. But we are handicapped by the want of a covered means of conveyance of articles to be disinfected. An open cart is hardly the proper vehicle to be used by a Sanitary Authority in conveying infected articles several miles through even a rural district. To say the least, it is primitive in its conception, and calculated to cause the very evil which the Council is constituted to prevent.

Vital Statistics.

Acreage 9,682 acres (estimated).

Population, census 1891 (estimated) 13,539.

Population middle of 1897 (estimated) 15,500.

BIRTHS.—The total births numbered 481, giving a birth rate per 1000 per annum of 31·03, as against 33·55 in 1896 ; of these 481, 234 were males and 247 were females. Again we have an excess of female births, the numbers for last year being 236 and 274 respectively. As the deaths were 282, the excess of births over deaths was 199, or exactly 100 less natural increase of population than that of last year.

DEATHS.—The gross number of deaths occurring in the locality was 275, to which must be added seven that occurred in Keynsham Union Workhouse, belonging to this district, bringing the number up to 282. The rate was therefore 18·19. This increase was due to the high mortality of the first quarter (105) due to Measles, Whooping Cough, and the respiratory diseases induced thereby. Subtracting the deaths due to these we arrive at a rate of slightly over 15.

The *Infant Mortality* this year is very considerably increased from 107·84 to 162·16 per 1000 children registered during the year. The actual number is 78 out of 481 births. This is very striking. Nine died from Whooping Cough, 21 from debility from birth or premature birth, 11 from respiratory diseases, 6 from Marasmus, 9 from Diarrhœa, 4 from Convulsions, 2 from Accidents, 2 from Meningitis, 2 from accidental suffocation, and the other ten from various diseases. I shall make no observation on these figures, but leave the inference to be drawn according to each one's individual knowledge. This is an excessive infantile mortality, and greatly increases your general death-rate.

Zymotic Death Rate, as explained in last year's report is as follows :—Diphtheria 1, Membranous Croup 1, Enteric Fever 3, Puerperal Fever 1, Measles 12, Whooping Cough 16, Diarrhœa 4. This gives a total of 38, and therefore a Zymotic rate of 2·45. The increase, you will notice, is entirely due to the fatality of Measles and Whooping Cough, and especially as these were incident at the same time and on the same individuals, and those under school age.

The usual Tables are appended.

DAIRIES, COW-SHEDS, AND MILK-SHOP ORDER.—This order, though in force soon after being made, has been practically in abeyance. The register has never been kept up, and therefore we had nothing to guide us in our work. The method pursued was as follows:—In each parish we applied to the Assistant Overseer to go over the rate-book, and by this means we obtained the names and addresses of most of those engaged in this particular business, which entailed visits to a large number of places not coming under the order, but at the same time led to the inspection of the sanitary condition of farms that otherwise would not have been inspected. When the proper time came large notices were posted all over the district, of the usual form. In deciding each individual case, you wisely laid it down as a guiding principle that everyone dealing in milk, as milk, should be on the register. The result is that up to December 31st, 1897, 22 names were placed on the register, and shortly after that date 35 more were also registered. We hope now to keep the register up to date, and also to inspect each Dairy and Milk-shop periodically and regularly, and report thereon. It is desirable in our inspection to know, not only the condition of the premises from which our milk is drawn, but also the destination of the milk produced in our district. If each district were thus informed, much help could be given by the mutual information at command in cases of an outbreak of Typhoid Fever, such as recently happened at Clifton. A neighbouring Medical Officer of Health received the suggestion favourably. I see no difficulty with a good register, in managing to do this, and it would render the register much more useful. During our inspection we naturally discovered many Dairies engaged in the making of butter and cheese. I consider it quite as necessary to secure good sanitary conditions in these as in milk-selling Dairies. It seems to me, now that we know where they are situated, we may as well inspect and report on them from time to time. It is a curious anomaly in the Order to find them excluded. The conditions of the production of anything for the food of man should be under inspection ; and it would be easier to see that these conditions were proper as to the production of butter and cheese under this order than by any other means.

HOUSING OF THE WORKING-CLASSES ACT.—The work done under this Act during 1897 has been but little, and mostly of an unofficial nature. Three premises were condemned, and afterwards improved so as to be made habitable. Unofficially I have frequently had to point out defects, which in each case were remedied. It is a fact that many cottages are badly constructed and damp ; still a larger

number is without a bedroom possessing a fireplace. I consider no house ought to be without such a room to be occupied in case of illness. Many an illness is prolonged and many a life lost from this cause.

Though coming under the main Act (1875), in this connection I have to notice five cases of over-crowding reported on to you. I have reason to think there still are more undiscovered. In one remarkable case we found a father, three grown-up sons, and two grown-up daughters, all sleeping in the same room, and that not a large one. Such a state of things is deplorable, and reminds one of the disclosures made in an early report of a Royal Commission.

URBAN POWERS AND BYE-LAWS.—During the year application was made to the Local Government Board for a large number of urban powers. The result was that an Inspector was sent down by the Board to make an inquiry. After a delay of some months an intimation was given that certain of these powers would be granted. Regarding the others some further correspondence took place, the final result being that we are promised nearly all we asked for, but after a great waste of time. I append a table (as was done last year) got up by your Clerk, of the powers we now have. This will be a great help in keeping up the whole work systematically.

But for an order of the County Council already given, received when this report was ready for the printer, you would have had it in hand a month earlier.

I may now conclude by thanking my fellow officials, and others, for the kindness and help received during the last year. It is not out of place to hope that, in the future, as in the past, we may all work together for the weal of the district.

I am, gentlemen,

Your obedient servant,

W. MURRAY, M.D.,
M.O.H., Warmley Rural District Council.

TO THE WARMLEY RURAL DISTRICT COUNCIL.

Gentlemen,

I have the honour to submit the following brief report, showing the amount of work done in this department during the past year, which will I trust receive your approbation.

Particulars of Nuisances

DEALT WITH AND ABATED.

House drains entirely relaid, trapped, and ventilated	...	6
House drains repaired	... ..	5
W.C.'s cleansed and amended	... ..	20
Dirty and dilapidated houses cleansed and repaired	...	5
Offensive deposits removed	... ..	30
Cesspools abolished	... ..	3
Keeping of pigs prohibited	... ..	1
Cases of overcrowding	... ..	5
Bakehouses	... ..	4
Factories and Workshops...	... ..	6
Dairies, Milk Shops, etc., No. of places visited	...	96
Total No. of vists made	...	256
Dairies put on Register	...	22
No. of cases of infectious diseases	... ..	104
Total No. of visits	... ..	230
Houses disinfected after infectious diseases	...	60
Cesspools repaired	... ..	4
New cesspools...	... ..	10
Extra W.C. accommodation	... ..	5
New Houses supplied with water certificates	...	11
Company's Water supplied to new houses	...	8
Nuisances abated	... ..	150
Re-visits to see work in progress	... ..	230
Samples of water taken for analysis	... ..	44
Quarries inspected	... ..	7
No. of quarries fenced	... ..	2
Reports under Petroleum Act	... ..	2

C. R. CROSS,

Inspector of Nuisances.

MANGOTSFIELD SEWERAGE.

Report as to lengths of Sewers laid, and Disposal Works
constructed during the year ending March 31, 1898.

BANK CHAMBERS, STAPLE HILL,

BRISTOL, *February 24th, 1898.*

WM. MURRAY, ESQ., M.D.,

Staple Hill, Bristol.

Dear Sir,

During the year several lengths of sewer have been laid in Soundwell, and two in Downend, amounting in all to about $1\frac{1}{3}$ miles. These were provided with necessary manholes, lampholes, and flushing chambers. This brings up the total length of sewers laid in connection with the above scheme to $18\frac{1}{2}$ miles.

The ventilation of the sewers will be completed during the month of March ; the system adopted being that of up-cast ventilating shafts at the heads of sewers, with fresh air inlets at the lower points.

There is no reason why the work of connecting the house drains to the sewers should not be proceeded with after March 2nd, as the outfall works will then be sufficiently advanced to be able to deal with the sewage brought down from such connections.

These works were commenced in May, 1897, and are now practically complete. They consist of Detritus, or Screening Chamber, two circular or upward-flow Precipitation Tanks, five Clarifiers and four Filter Beds, and a large area of land for further filtration, to meet the requirements of the Local Government Board. There are also Sludge Wells, Lime-mixing Chamber, Sludge Rams, and Presses ; the machinery being driven by means of an Oil Engine, and the Rams worked by compressed air.

The sewage before entering the Detritus Chamber is treated with Fertozone, which deodorises and precipitates it. It then passes through the Detritus Chamber and into the Precipitation Tanks, each of which has a capacity of 44,000 gallons, and can be worked under pressure to fifteen times that capacity in twenty-four hours. I do not however recommend this, as the tank effluent would then contain more suspended matter than is desirable, with the result that the Clarifiers would require more frequent cleansing. The tank effluent passes through five Clarifiers, each 6 feet in diameter, which retain practically the whole of the suspended matter in that effluent.

The clarified effluent is then passed through the four polarite Filters, each 32 feet by 34 feet, and subsequently, over about 12 acres of land as mentioned above.

The works will be capable of dealing with a population of from 15,000 to 18,000, allowing only for slow filtration.

The sludge is drawn off from the precipitation tanks by means of revolving arms, the top water being removed from the sludge wells. The sludge is limed, and, falling into two Rams, is forced into the Presses and made into cakes for grinding or otherwise. Provision has been made for liquid sludge being obtained at the works. It has been found in other places that there is a ready sale for sludge for manurial purposes, the price more than paying the cost of pressing or otherwise treating same. There is no reason why equal success should not be obtained at these works.

It has been arranged that a portion of the filtered effluent shall be run back to the effluent well in the Pressing-house, lifted into a storage cistern, and used for dissolving the Ferozone, thus saving annual expense for Water Company's supply.

A Manager of the Works has been appointed, and a house on the out-fall site is being erected for his residence.

The works at the outfall have been carried out at a cost of about £900 under the amount of the accepted tender.

You will doubtless gather from the above description that the disposal works embrace the most modern developments of sewage treatment and utilisation.

I am, dear sir,

Yours faithfully,

WALTER L. LE MAITRE,
Engineer.

(A)

TABLE of DEATHS during the Year 1897, in the WARMLEY Rural District, classified according to Diseases, Ages, and Localities.

NAMES OF LOCALITIES adopted for the purpose of these Statistics ; public institutions being shown as separate localities. <i>(Columns for Population and Births are in Table B.)</i> (a)	MORTALITY FROM ALL CAUSES, AT SUBJOINED AGES.								MORTALITY FROM SUBJOINED CAUSES, DISTINGUISHING DEATHS OF CHILDREN UNDER FIVE YEARS OF AGE.																						
	At all Ages (b)	Under 1 year. (c)	1 and under 5 (d)	5 and under 15 (e)	15 and under 25 (f)	25 and under 65 (g)	65 and up- wards (h)			Smallpox 1	Scarlatina 2	Diphtheria 3	Membranous Group 4	FEVERS.					Cholera 10	Erysipelas 11	Measles 12	Whooping Cough 13	Diarrhoea and Dysentery 14	Rheumatic Fever 15	Phthisis 16	Bronchitis, Pneumonia and Pleurisy 17	Heart Disease 18	*	Injuries 20	All other Diseases 21	TOTALS. 22
														Cancer 5	Enteric or Typhoid 6	Continued 7	Relapsing 8	Puerperal 9													
WHOLE DISTRICT ...	275	78	40	15	11	61	70	Under 5 5 upwds.	...	...	1	1	...	...	...	...	...	...	...	9	16	4	...	4	24	1	...	6	52	118
								Under 5 5 upwds.	...	...	...	...	...	...	...	...	...	...	...	3	...	...	...	21	23	31	...	7	51	157
								Under 5 5 upwds.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
TOTAL ...	275	78	40	15	11	61	70	Under 5 5 upwds.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
The subjoined numbers have also to be taken into account in judging of the above records of mortality.																															
Deaths occurring outside the district among persons belonging thereto.	7	...	...	...	...	1	6	Under 5 5 upwds.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	2	...	...	3	7
Deaths occurring within the district among persons not belonging thereto.	...	...	...	...	...	...	..	Under 5 5 upwds.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1 9

* The heading of column 19 is left blank for the insertion of Influenza, or any other disease which it may be thought desirable to record.

(B)

TABLE of POPULATION, BIRTHS, and of NEW CASES OF INFECTIOUS SICKNESS coming to the knowledge of the Medical Officer of Health, during the Year 1897, in the WARMLEY Rural Sanitary District; classified according to Diseases, Ages, and Localities.

NAMES OF LOCALITIES adopted for the purpose of these Statistics; Public Institutions being shown as separate localities.	POPULATION AT ALL AGES.		Registered Births	Aged under 5 or over 5	NEW CASES OF SICKNESS IN EACH LOCALITY, COMING TO THE KNOWLEDGE OF THE MEDICAL OFFICER OF HEALTH.													NUMBER OF SUCH CASES REMOVED FROM THEIR HOMES IN THE SEVERAL LOCALITIES FOR TREATMENT IN ISOLATION HOSPITAL.													
	Last Census	Estimated to middle of 1897.			Smallpox	Scarlatina	Diphtheria	Membranous Group	FEVERS.						Cholera	Erysipelas	Measles	Influenza	Smallpox	Scarlatina	Diphtheria	Membranous Group	FEVERS.					Cholera	Erysipelas		
									Typhus	Enteric or Typhoid	Continued	Relapsing	Puerperal	Typhus									Enteric or Typhoid	Continued	Relapsing	Puerperal					
(a)	(b)	(c)	(d)	(e)	1	2	3	4	5	6	7	8	9	10	11	12	13	1	2	3	4	5	6	7	8	9	10	11	12	13	
WHOLE DISTRICT ...	13529	15500	481	Under 5 5 upwds.	...	14 56	2 4	1 ...	...	6	...	...	1	...	20	numer- ous.	a few do.	...	...	...	...	...	...	...	...	...	...	...	...	...
	...	...	...	Under 5 5 upwds.	...	...	...	...	...	...	...	...	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
TOTALS	15329	15500	481	Under 5 5 upwds.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...

State here whether "Notification of Infectious Disease" is compulsory in the District?—Yes. Since when?—November, 1891. Besides the above-mentioned Diseases, insert in the columns with blank headings the names of any that are notifiable in the District, and fill the columns accordingly. State here the name of the Isolation Hospital used by the sick of the District. Mark (H) the locality in which such Hospital is situated; and if not within the District, state where it is situated.—Keynsham Isolation Hospital, at Keynsham.

(C)

WARMLEY RURAL DISTRICT.

TABLE showing MORTALITY from certain Classes of Diseases,
and Proportion to Population, and to 1000 Deaths.

	Total Deaths.	Proportion to 1000 of Population.	Proportion to 1000 Deaths.
1.—Seven principal Zymotic Diseases	37	2·38	131·20
2.—Respiratory Diseases (other than Phthisis) ...	47	3·032	166·66
3.—Phthisis, and other Tubercular Diseases... ..	29	1·87	102·83
4.—Cancer	16	1·032	56·7
5.—Diseases of Brain and other Nerve Diseases ...	28	1·793	99·29
6.—Accident	13	·838	46·09
7.—Suicide	—	—	—
8.—Prematurity and Debility from Birth	18	1·163	63·83
9.—Extreme Old Age (over 80)	16	1·032	56·7
10.—Surgical Diseases (including Operation) ...	—	—	—

NOTES.

- 1.—Includes Measles, Scarlatina, Whooping Cough, Enteric Fever, Smallpox, Diphtheria and Diarrhœa, and Dysentery.
- 2.—Chiefly Bronchitis, Pneumonia, and Pleurisy.
- .—Tuberculous Diseases affecting any organ.

URBAN POWERS



The following Urban Powers will be in force when the promised order of the I. G. B. is issued.

Public Health Act, 1875.

Sec. 25—Whole district

26—(1) All except Hanham Abbots

44—Whole district

66—Mangotsfield only

112—Whole district

113— „ „

114— „ „

115— „ „

155— „ „

157— „ „

158— „ „ except Hanham Abbots

160— „ „

161—(1) Mangotsfield only

169—Whole district (except part 1)

170— „ „

171—(as to fires) Mangotsfield only

3 Public Health Buildings in Street Act, 1888

23 Public Health Acts Amendment Act, 1890, whole district

Part 2 „ „ whole district

Towns Police Act, 1847.

Whole district

Sec. 28—par as 13, 17, 18, 19, 24 and 30.

„ 29

„ 32

„ 33

METEOROLOGICAL TABLE, 1897.

[illegible]

